Frankly Speaking

Our Reader Survey

IN July of this year it was decided to make a survey of the readers of TRAFFIC ENGINEERING in order to determine the types of articles and subject matter most desired.

A questionnaire form was sent to each subscriber, and completed forms were returned by 51 city traffic officials, 42 state traffic officials, 19 public transit engineers and 46 other traffic authorities.

A summary of the returns revealed Parking to be the subject of major interest, followed closely by City Planning and Signals, Signs, and Markings in 2nd and 3rd place, respectively.

Public Transit was in 4th place; Pedestrians, 5th place; Freeways, 6th; Speed, 7th; Street Lighting, 8th; Traffic Engineer Administration, 9th; and War Transportation Problems, 10th; in order of reader interest.

The 51 city officials (23 of whom are city traffic engineers) who answered the questionnaire put Parking first, City Planning second, Pedestrians third, Signals, Signs and Markings, fourth, and Public Transit, fifth.

The 42 state officials (26 of whom are state traffic engineers) voted Freeways as subject of top interest; Parking, second; Speed, third; Signals, Signs and Markings, fourth, and City Planning, fifth.

The 19 public transit engineers put Public Transit in first place, City Planning, second; Parking, third; Freeways, fourth; and Signals, Signs and Markings, fifth.

During the coming year, this survey will form a valuable guide in determining subject matter for the magazine.

During the past year, our 12 issues averaged 30 pages per issue, an all time high, which was 6 more than the average during the previous year, 1942-43. During the next 12 months, we expect to better last year's record.

Comments, criticisms and suggestions relative to the magazine will always be gratefully accepted.

Henry Evans

Editor.

Getting the Most Out of Your Traffic Signal System

by HOLDEN M. LEROY

THE City of Detroit has a total of 664 signalized intersections. Of these, 544 are under the control of the City Traffic Engineering Bureau and 120 are controlled and operated by the Wayne County Road Commission on county roads lying within the City limits. By far the largest percentage of these are from 15 to 20 years old and are operated by induction motor controllers which lack much of the flexibility present in modern signal control equipment. The Traffic Engineering Bureau determines the timing and method of operation of the existing City owned signals and develops the plans for all new installations or modernization. All maintenance, operation and construction work is done by the Traffic Signal Division of the Public Lighting Commission.

Shortly before the war a three-year program of signal improvement and new installation was developed. This included both controller modernization and visibility improvement by means of mast arm installations and relocation or replacement of existing units. With the outbreak of war and the curtailment of the use of critical materials, this program was revised to include only a few of the most important intersections lying on the major war traffic routes or adjacent to war plants.

Holden LeRoy (Assoc.) is Senior Assistant Traffic Engineer, City of Detroit Traffic Engineering Bureau.

Preventive Maintenance

Because of the very large amount of war work being done in Detroit and the resultant important war traffic on the streets it then became of prime importance to get the most out of our traffic signal system. To accomplish this, a program of preventive maintenance has been followed. Routine maintenance work has been scheduled so that sources of inefficiency or potential trouble can be uncovered and corrected before serious trouble develops causing an interruption in the control at the intersection. In this connection well known principles of electrical engineering have been applied and supplementary equipment installed on the controllers to increase their efficiency and make it possible to test for weaknesses starting to develop.

The full time signal maintenance men also check periodically the entire equipment at each intersection. This includes the timing, general operation and condition of the controller and its proper lubrication together with an inspection of the condition and alignment of signal heads and the general conditions of the intersection. At points where insulating transformers (to be described later) have been installed, cable ground resistance is also measured during these checks. Due to the age of this equipment such regular inspection is very important in order to maintain continuity of service.

In addition to this program of preventive maintenance, means have been developed for coordinating the old

isolated induction motor controllers without the use of interconnecting cable thereby making it possible to improve the movement along many important streets in spite of the shortage of cable and other critical materials.

Signal Bulb Replacements

Because of the fact that a burned out signal bulb may very easily cause an accident, a regularly scheduled lamp replacement program was instituted about four years ago. Replacements are scheduled to take place shortly before the expiration of the normal life of the bulb. Intermediate burnouts are therefore limited to defective bulbs or those few having a shorter than normal life. The decided advantages of this system can be shown by the following figures. In the first month following the assumption of signal maintenance by the Public Lighting Commission with approximately 13,300 bulbs in service there were 1980 lamp burnouts. In the twelve month period ending June 30, 1943 there were only an average of 136 lamp burnouts per month or a total of 1642 for the year indicating a tremendous contribution to public safety. The old lamps removed during relamping operations are used for replacing the intermediate burnouts and for relamping the ambers.

In connection with the relamping work, all lenses and reflectors are thoroughly cleaned and polished. It has been found that as much as 60 per cent of the beam candlepower output of the signal can be lost through accumulated dirt on these parts of the equipment. To facilitate this work a special cleaner of the type used on windshields was developed to meet City specifications. This is equally good in winter or summer as it does not freeze and requires no pail and water handling.

Synchronous Master Controller, showing synchronous time switch, voltage failure relay and light. Insulating transformers mounted behind terminal boards.

(*Photo by Detroit Traffic Engineering Bureau*)

Smaller Bulbs Better

The signal system in Detroit as originally installed used 250-volt traffic signal lamps. Efficiency tests conducted by the Public Lighting Commission showed that with the usual traffic signal optical unit the beam candlepower output using these lamps at rated voltage was almost exactly 50 per cent of that found in the same unit using 125-volt lamps at rated voltage. The necessarily larger and differently shaped filament of the 250 volt lamp did not place the light source at the proper spot in relation to the focal point of the lens and reflector. Also in many locations the power source is quite remote resulting

in an excessive drop and low voltage at the signals. These two elements combined resulted in many cases in very weak signal indications.

Insulating Transformer

We were, therefore, faced with two problems; to correct for voltage drop and to provide a 125-volt source for the signal lamps. As an experiment, a trial was made of the installation of 2 to 1 ratio transformers with 5-5% voltage raising taps on the primary side. Such a marked improvement was at once evident in signal visibility that a city-wide program for such installations was instituted. Following the installation of a number of these transformers other distinct advantages became evident.

1. The transformer provides a signal circuit insulated from ground which therefore allows the signals to operate normally even though a ground should develop on one side of the circuit thus providing less interruptions in service.

2. By use of an ungrounded circuit it becomes a simple matter for the maintenance man on routine checks to test the entire intersection for the ground resistance of cable insulation. This discloses potential source of trouble such as incipient cable faults before failure occurs, and allows repair or correction at conveniently scheduled times and during light traffic conditions. Several serious cases of trouble have already been avoided by the use of these tests in old underground circuits by indicating damaged insulations. The inability to locate such trouble until complete failure occurs often results in a shut down during the most unfavorable conditions.

3. Records have proven that the 125-volt lamps with their stronger filament construction have a longer life and therefore routine lamp replacement periods can be increased by 15 to 20 per cent with resultant savings in lamp usage. The cost of these lamps is also 30 to 35 per cent less than that of 250-volt lamps.

Savings resulting from the above advantages in the use of these transformers make it possible to amortize their cost over a relatively short period. Operating experience obtained with the use of these insulating transformers indicated the desirability of a similar installation on interconnecting cable in coordinated systems. Consequently a program has been started for the installation of a 1 to 1 ratio insulating transformer at the master controller in all such systems.

Improving Coordination

As stated previously a large number of intersections were controlled by independent induction motor controllers many of which were located on streets carrying large volumes of important war traffic. Lack of signal coordination on these streets was causing a good many stops and delay. Inasmuch as new control equipment and interconnecting cable was out of the question due to wartime restrictions a means was developed whereby these controllers could be given the characteristics of a synchronous controller.

A synchronous motor driven time switch with a gear change for different cycle lengths and a means for obtaining any desired percentage split of the cycle was installed on the control cabinet. This time switch was so connected to the induction timer that it acted as an individual master controller for the intersection. The cycle length and percentage division of the cycle were set up on the synchronous device and the induction controller became merely a switching mechanism for changing the signal indications, remaining at rest except at these switching periods. Due to the fact that the timing is accomplished by the synchronous device the settings on the

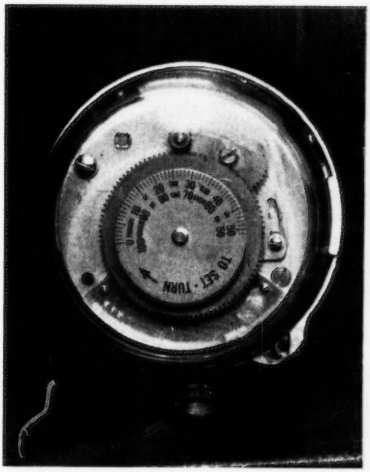
induction controller are advanced to the maximum point providing maximum torque on the motor when it is required to run. This has overcome quite erratic operation due to temperature changes, etc., which resulted from slow speed, low torque operation during parts of the cycle under the previous type of operation.

A close check on the operation of this equipment has shown that these controllers when thus equipped have the operating characteristics of all other synchronous devices. Without local trouble or voltage failure the established offsets between signals in such a system have been found to maintain a phenomenal accuracy. This has enabled us to set up coordinated signal systems on most all of the major streets resulting in a marked improvement in traffic flow.

Voltage Failure Indicator

A voltage failure relay and an externally mounted indicator light have been placed on all such installations as a ready means of indicating when voltage failure or dips may have thrown the signals out of step. These relays are adjusted to open at a voltage higher than that at which the motor will lose synchronism so that the need for a check will always be indicated after an abnormal voltage dip.

By use of additional time switches and clock switches a change in the offset of a given signal with relation to others as well as a change in percentage division of the cycle can be obtained to fit its operation to peak-hour changes in the traffic flow. Successful use has also been made of these synchronous time switches as synchronous master controllers to furnish coordinating impulses on interconnected systems.



Synchronous Time Switch, showing cycle gear and method of obtaining percentage division of cycle.
(Photo by Detroit Traffic Engineering Bureau)

A Central Timing Reference

In the signal shop of the Public Lighting Commission a gong has been installed and is operated by any one of a series of these synchronous time switches. In this manner a tone signal can be given at intervals corresponding to the various cycle lengths in use throughout the City. The maintenance man on the street can hear this tone by calling on either the police or Bell telephone systems. All signal offsets are established with relation to the time signal rather than to adjacent signals. Because of a single point of reference a system can be timed without having the error due to individual reaction time cumulative from one intersection to the other as is the case when working along the street with offsets given from one intersection to the next. A telephone is usually handy and the stop watch can be set with the gong at each intersection. This method has made it possible to obtain offset timing with split second accuracy.

Flashing Operation

To further fit the signal system to war traffic needs some 40 intersections have been placed on a part time "go-stop" schedule of operation. At all such locations a flasher and synchronous time switch have been installed. The time switch has been used even though the signal was not in a coordinated group so as to have the advantage of the high starting torque operation in severe winter weather when the controller might have become stiff in its operation because of several hours of idleness. Without this the cycles may be unduly lengthened when the controller resumes normal operation.

Modern controllers for some time have been equipped with facilities for always returning a flashing signal to normal "go-stop" operation in the main street green position. It has seemed equally desirable to start a flashing operation also in the main street green position. This method assures a driver approaching the intersection on the main street green indication and expecting to go on through the intersection, a flashing amber but more important a driver on the side street can never be suddenly confronted with a change from green to a flashing red without the normal change interval. A circuit to provide this operation has been adopted as a standard for such part time signals in the Detroit system.

The developments described were brought about largely by the necessity of bringing an old and obsolete signal system into condition to handle modern day wartime traffc in an efficient and safe manner. Results have shown that a great deal of success has been attained. A great deal more can be done and is being planned as post-war work when materials are again available.

PUBLIC TRANSPORTATION CRISIS

Public transportation should have a high priority in the thoughts of every businessman charged with procurement and maintenance of adequate personnel. Keeping buses on the road has become increasingly more difficult due to the manpower, tire and, of late, the parts shortage. Once they are on the road every bus should be operated 100% efficiently. This calls for intelligent traffic planning, the elimination of bungling and indifference by traffic authorities, the revision of outmoded pre-war regulations, etc., looking to the elimination of bottlenecks and snail-pace traffic, since these conditions result in the need of additional equipment.

Incidentally, it has been my observation that while public transportation companies are performing yeoman service during the current crisis, small operators having only spasmodic charter work are permitted to keep their equipment which is not only becoming obsolete but is sorely needed to carry essential workers twenty-four hours a day. Leasing of this equipment to utilities serving industrially crowded areas should be a "must".

For two years authorities have talked to themselves about car maintenance, while the vast majority of private car owners have taken the "It can't happen to me" attitude. Now, slowly, the junk yard "treasure hunts" for replacement parts resemble the gold rushes of yore but with less favorable results. The spotlight of publicity should be turned on this imminent danger.

Submitted by Theodore E. Buell, in charge of employee transportation, Pratt & Whitney Aircraft, East Hartford, Conn.

Order or Confusion in City Transportation Planning?

by WALTER H. BLUCHER

THE most remarkable thing about the broad-range highway planning that has gone on in this country in the past decade, and especially in the past half-dozen years, has been the "discovery" of the cities.

Cities, traffic and bottlenecks have been with us for a long time. However, it was not until traffic studies began to shed light on the relative magnitude of urban and rural traffic problems, that the interest and eloquence of federal and state highway engineers in charge of main-line road-building were deflected from the cause of the rural roads to the claims of the cities. This emphasis is brought out strikingly in the report recently issued by the National Interregional Highway Committee. New facilities for urban traffic, new expressways and other arterials, say the designers of the interregional system, must be provided without delay.

A respectable amount of the authorization provided for in the post-war federal highway program bill, reported out early in June by the Committee on Roads of the House of Representatives, is earmarked for expenditure within municipalities, and the needs of urban areas are further recognized—though in a haphazard fashion—by weighting the population factor more heavily in the formula fixing the distribution of funds among the states. Along with this trend, we are doubtless going to see increased city participation in the sharing of gasoline taxes and license fees collected by the states.

The author is Executive Director of the American Society of Planning Officials. This article originally appeared in the July, 1944, issue of *Better Roads* magazine.

Cities Ought to Be for People

Does all this—the acknowledgment of the size of the city problem and the prospective provision of new revenues in substantial amounts—mean that we are at last on our way toward a solution of the transportation difficulties of cities? Not necessarily.

Cities are for people to live in and work in. They should be designed for the happiness and convenience of the people who live in them. It is in how close we come to this objective that we measure our success in planning and providing the facilities necessary for city living—not in the mere existence of the facilities themselves, as measured in capacity or cost.

We provide transportation to move people about purposefully—not for its own sake. Good city transportation will move people conveniently, rapidly and inexpensively. Good city transportation planning will establish or encourage the use of each form of transportation—private passenger car, bus, street railway, elevated line, subway, suburban steam or electric-railway service—where and when it will move people with the least expense, and with the greatest speed and comfort. The motor-vehicle circulatory system of the city is only a single element of the entire transportation plan. If city highway planning fits into the city transportation plan as a whole—if it measures up to the standard of cheap and quick and convenient movement for most city-dwellers—then it is good highway planning and good city planning. If it does not, then it is bad planning and ultimately bad for city living, no matter how effective the system of city streets and expressways may be in delivering large numbers of motor vehicles rapidly from point to point.

Moreover, if our cities were designed for the happiness and convenience of the people who live in them, the people would live somewhere near their work. As things are, most people don't. Many workers employed in factories on the outskirts of cities live in the central blighted or slum areas. The factories may be where they are because land is cheap there. The workers live where they do because they can't afford to live anywhere else. The consequence is a long round trip between home and factory each workday in the week. At the same time, many white-collar workers living in the outskirts travel all the way downtown to their jobs in the morning and back again at night. The paths of workers in these two groups cross twice a day.

This wouldn't happen if we went down to fundamentals in planning and directing the future development of our cities. We would reduce the number of long trips required to a minimum. We would reduce transportation costs and save people's time. We would even give the individual's two legs a chance! Will these things come to pass? Of course they won't—if we continue to follow the old pattern and do the things that seem to be the most expedient for the moment in developing our city highways and all the other separate facilities that city-dwellers require.

Long-Range or Short-Range View?

The Interregional Highway Committee's approach to the urban problem is refreshingly broad. This is cheering, and even exciting.

In the past, the designers of highway and street systems have tended to be "isolationists" of a high order. Their solutions of transportation problems have been mostly mechanical solutions, designed to relieve the intolerable situation of the moment. Is traffic choking a thoroughfare? Then widen the thoroughfare, relocate it, protect it from encroachment. Is downtown parking getting out of hand? A superior type of motor-vehicle terminal is the answer. Are traffic fatalities on the increase? There are mechanical palliatives for that too, and some of them are pretty good — considered purely as engineering solutions. But the engineer didn't go back of the traffic count or the accident spot-map. This meant that traffic had quantity, but no qualitative characteristics—no purpose, from the viewpoint of the traffic engineer and the highway designer. However, the planner who is concerned with the design or redesign of the city organism as a whole can't put traffic off in a compartment of its own.

Some highway planners are fully conscious of the physical decay and near-bankruptcy that most of our large cities must grapple with. But they are likely to argue that the free flow of motor traffic is what is needed to keep the cities from falling apart entirely—to hold the stores and businesses now situated in the central area. To build new expressways for this purpose and to take no fundamental steps to check dispersion of population and physical and human decay at the cities' hearts would be, it seems to me, a final act of despair. If the construction of a new city expressway is good for the future of the city, that is one thing; if it is not, then the city is in the position of building something just because it has the money.

What I am proposing is a fundamental change in the transportation habits of city-dwellers. The city-dweller would be must less concerned about his right to have new traffic improvements constructed if he found that he could cut his city driving in half, and then, say, half again, and live in a totally more habitable city and have more leisure time.

Back to Basic Principles

It should be clear that I have been talking about the larger urban areas, and not the small and medium-sized cities. The density of motor-vehicle ownership is, with some exceptions, much greater in small towns and cities than it is in big cities—and that is as it should be. In a small city that is nevertheless large enough so that many daily trips exceed comfortable walking distance, the individual motor vehicle may be the only feasible means of transportation. The transportation and traffic problems of a small town may be solved merely through the provision of an off-street parking lot.

I hope that it will be clear that I haven't any crotchety or perverse bias against the motor vehicle and its useful application anywhere. I do disagree with those highway authorities who begin and end their urban transportation planning with the "unshackling of the fetters" that now restrict the free circulation of the motor vehicle in our large cities.

The urban disease is going to force us to take seriously the replanning of the entire areas of our large cities and their environs. The motor vehicle, to be sure, has been only one of a number of decentralizing influences. People were moving outward along the lines of steam railways long before we began to rely on the automobile as a means of transportation. But we must now take account of all the things we are doing—and are not doing—when we propose the enlargement of the arteries of motor-vehicle movement for the purpose of carrying people into and out of the cities under the illusion that we are getting rid of basic sore spots because we are removing traffic bottlenecks. We are failing to get at the source of the malady. We may even be creating conditions more favorable for its progress. The fundamentals of transportation planning for large cities can be summed up in the statement of two basic principles. First, city transportation reaches the ideal when we reduce the number of people who have to be carried to the absolute minimum. Second, necessary movement of people should be by the most efficient method. Most of the proposals I have seen and heard for improving transportation in large cities would receive a pretty low score if measured by these requirements.

DISCUSSION OF "ORDER OR CONFUSION IN CITY TRANSPORTATION PLANNING"

by J. W. A. Bollong

Mr. Blucher has written plenty of criticism which is good for the ordinary person, but anyone competent to express criticism should also accompany those words with constructive ideas. These constructive ideas I have failed to find in the article.

The writer is firmly sold on master planning in any city, community, state, or nation, so that any portion of that master plan may be constructed and will fit into the unified whole.

Mr. Blucher is to be commended on his argument on the discovery of the city which has been the "forgotten man" in the scheme of affairs, especially as applied to highways.

It may have been unintentional that there was a marked leaning toward mass transportation; this is incorrect in this day and age. Mr. Blucher omits two very important elements in city transportation, namely, comfort and safety; and that is applicable whether it be to mass transportation or private automobiles. I would say

until the advent of the trolley bus and motor bus, that the private car had the edge in this respect.

Mr. Blucher's statement with regard to the "isolation of highway designers" is entirely uncalled-for and without support of fact. His statement of a traffic choked thoroughfare and its widening as being "cheering and exciting" is somewhat facetious. His statement in regard to the cities growing poorer and poorer is further without statement of fact.

In paragraph six, the measure of city planning is stated as, "how many or how few people can be moved about." This should be more equitably stated by saying that happiness is derived from the proper arrangement of land uses; and that convenience, comfort, speed, and safety should be considered; so that all sections are given the maximum of accessibility.

There seems to be some confusion in the mind of Mr. Blucher when a simple, clearly-cut traffic movement is imagined: of the non-white collar workers moving out to their jobs; and of the white-collar workers moving in town to their positions. The pattern of origin and destination is by no means as simple, as workers come from every section to their employment and all centers of employment are not in the central business district.

Mr. Blucher further should consider that the highway planner is not the policy making member of the city, county or state government, and therefore it must be understood that he is assigned the job of making more efficient the channels for the movement of people and goods. In so doing, he makes it possible to move a greater number of people and goods, with less congestion and greater safety; and should be commended rather than be given non-supported criticism.

Taking it all in all, the approach in this article, while being dogmatic, is definitely negative. More would have been accomplished if a positive approach had been taken for improving housing, recreational and social conditions which, while related to urban transportation, are closer to the heart of the problem than the channels which take us into, out, within, around, and through the area.

Traffic Control in Casablanca

Editor's Note: This is taken from the MP Bulletin, an army publication, and deals with the traffic situation encountered by our Military Police and how they solved the traffic engineering problems. Author was 1st Lt. E. W. Wellman, CMP.

The traffic control problem in Casablanca was a difficult one. The factors involved in forming a complete and efficient traffic plan were many and varied and included situations never before encountered in traffic control situations in America.

Here we found not only the usual problems of the roadnet, personnel, equipment and cooperation of civilian authorities, but a new problem involving the education and placement of local French police. Upon arrival we found the town had had no motor vehicular traffic for over two years due to the absence of gasoline. The native military, *ipso facto,* were absolved from any control regulations. Their few vehicles disregarded any traffic regulations. There was no enforcement over them. The native civil police had many new and inexperienced men, who had never regulated traffic with the result that personnel were inadequate to meet the problem. Traffic engineering was an unheard of pro-

fession and there was no traffic regulation plan.

The city itself as shown in the illustration, was a hodge-podge of interlacing streets, without a thought of city planning, much less traffic accommodation.

There were approximately 200,000 refugees from all over Europe in the city who had different views regarding traffic. Drivers' licenses were not required of the city population, consequently there were no tests on the degree of understanding regarding traffic regulations. Language differences between our own troops, the French, refugees of various nationalities, and many Arabic dialects, added to the confusion. Pedestrians had the habit of walking in the roadways as much as on the sidewalks. There was an utter disregard or ignorance of simple pedestrian rules of safety.

The fact that all vehicular traffic was horse-drawn or bicycle, the latter numbering about 200,000 complicated the traffic control problem.

Traffic control equipment was at a premium. There was not a single traffic light or regulatory sign in the entire city. There were a few directional signs indicating outlying points such as Aufa, Marrakech, Medina, Rabat, and Safi. Army vehicles for transportation were not available until December. The native police had two cars, both used by the commissioners of police.

Our communications facilities were limited to four portable hand phone sets procured for use by the provost marshal's office.

Traffic Officers Scarce

There were about 30 of the native civil police available for traffic regulation. The majority of these men were untrained in traffic work and none had any knowledge of the English language. The native military were continually depleting this force through mobilization.

American military police, available for traffic duty, numbered about 20 men. Only two of these men spoke French. Neither could read or write the language. This lack of understanding of the native language made it impossible to correct native drivers when they were in the wrong.

Street Layout a Problem

A serious problem of traffic control arose from the hazards of driving due to the actual city plan itself which was quite poor. There were many needless through streets, slowing down artery traffic. The bus terminal was a bottleneck, and a serious danger at the corner of Place de France and Blvd. D'Anfa. Buses were electrically propelled, by overhead trolley wires. Street surfaces were in a poor state of repair. Main highways ran directly through crowded areas. The indiscriminate planting of shrubs and trees caused many dangerous blind intersections.

Streets and avenues were not numbered but named. These names were not on regular corner posts but painted on wall corners. For the most part they were not discernible in a blackout.

Traffic Circles

Bottlenecks were common. Every traffic circle was a bottleneck. The French do not keep to the right when circling these center points. For example, a traffic circle having four streets entering at 90 degree angles, much like north, east, south and west, presents no problem to us, but a Frenchman entering from the south street, if he wishes to enter the west street does not circle to the right but goes left. Traffic circles with five or more streets entering the circle com-

plicated this situation. The biggest bottleneck was the port, with one main entrance at the Rue des Quatrieme Zouaves. Since our main traffic problem was distribution from the port we had to alleviate this condition.

One of the main arteries crossed a section widely used by pedestrians and cyclists between the hours of 0700-0900, 1100-1300 P.M. and again at 1700-1900. This pedestrian and bicycle traffic consisted of the whole city working population. The native has two hours for luncheon and for dinner and always goes home during these periods.

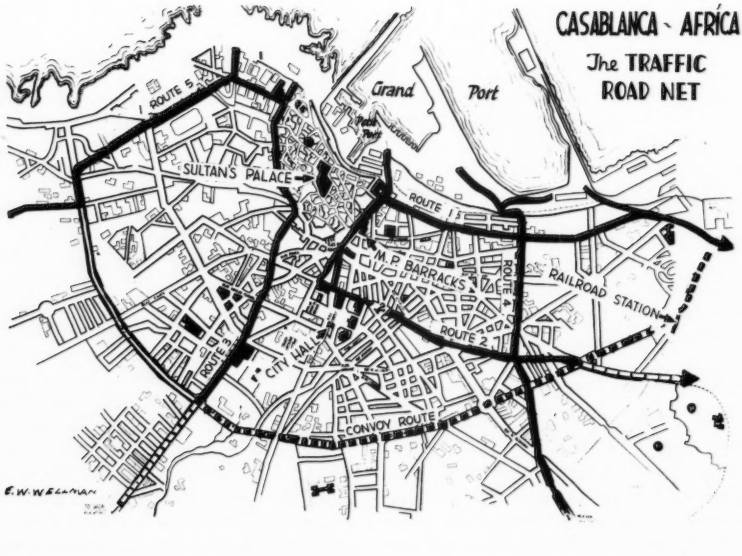
The roadnet was in use by our military vehicles 24 hours a day. The blackout took effect at 1900. This was a hazardous period since civilian bicycles and horse-drawn vehicles did not have blackout lights and could be on the streets until 2130 which was curfew time. Many accidents resulted from this fact.

Education Helped

With the help of the native civil police, we evolved several procedures for educating the civilian population and our own military drivers.

Since the majority of the population were familiar with native traffic regulations we would teach our men the differences of native regulation and ours, for example: Our drivers had to learn that in France and her colonies the vehicles approaching from the right had priority despite the fact that our drivers might be driving along a main artery. Another example cited is where horse-drawn vehicles take precedence over motor traffic at intersections where there is regulation of traffic.

The American method of circling right at a traffic circle became the rule. French civil police on the other hand had to learn our drivers' hand signals as did French drivers of Ameri-



can trucks to help our military policemen directing traffic. An American and native policeman were teamed at each regulated intersection for purposes of education of the public, military, and police, and enforcement of regulations both vehicular and pedestrian.

Traffic Signs Made Firewood

We were unable to lend the native civil police much in the way of equipment. We did lend them American flashlights which they needed badly. We made regulatory and directional signs of wood from packing cases, lettered in black on yellow background in French, English, and sometimes Arabic. Unfortunately the Arabs stole these promptly to use as firewood; the latter being a scarce commodity in French Morocco. The Arab and French police put a curb to this, but could never effectively stop this pilferage.

Vehicular Equipment

Army vehicles could not be found for our own use, nor could we get official permission to commandeer civilian ones. Finally through the aid of the French Police we made a list of Axis nationals interned, owning vehicles and where garaged, and picked up eleven of these vehicles, signing receipts which were to be turned in by them when released to our claims commission for payment. The vehicles were, for the most part, in need of repair being so long unused, but they served the purpose. Late in December, six motorcycles were procured for use from a base unit. There were no mimeographed forms for enforcement or break-down maps of the city.

We received 175 field artillery men as auxiliary military police which enabled us to use our own men for actual police work that required trained personnel.

The French civil police gave into our care about 20 men to help handle the traffic situation. For fresh arrivals of convoys this was extended to about 40 police; for parades up to 75 police. These were a great help on the civilian situation but not much help on convoy routing, because of language differences and amount of police training.

With the arrival of more military police units from the United States towards the middle of January our tasks were somewhat eased. Not only because of the military police training of additional men, but their numbers and the fact that some of their men could speak the native language which was one of our greatest difficulties.

Traffic Routing

In conjunction with the engineers' findings, we submitted the traffic routing as shown on the attached map. It will be noted how simple and flexible the road-net appears and how it serves its purpose of distributing supplies from the docks and routing of convoys through the city.

The road-net consists of six numbered main arteries and one alternate route. These were renamed "Military Route 1, 2, etc." Signs made of wood and lettered in black against a yellow background made it quite simple for drivers to follow. The language on the signs was in French, English, and in some sections, Arabic.

Five of these routes, plus the alternate route, were primarily for movement of supply to and from the docks. To make this more efficient no horse-drawn vehicles were allowed to travel along the length of these routes.

Convoy Route

The sixth artery was primarily used for convoys arriving from the south. When one did arrive to pass through, all traffic was cleared off this route; at other times this route served as an ordinary artery of traffic without restrictions.

This convoy route is shown by the dotted line on the map. The main point along this route was the railroad station which was used for transporting troops and supplies.

These were the main routes from the port area through town to depots, dumps, and airfields, and on the Western Atlantic Base Section, Central Mediterranean Section, and the Tunisian Section.

Traffic Studies Help

Volume counts of pedestrians, traffic, and speed checks were made along with the physical inventory. Although this was not done to exactness it was generally used. For example, Route 3 had an alternate route. This was found necessary due to the great number of pedestrians and cyclists converging on Place Marrakech 0700-0900, 1100-1300, and again at 1700, slowing down traffic along Route 3. Saturday is a big day for the Arabs. They do not work on this day but congregate in large crowds to listen to story tellers and street entertainers. One of their favorite spots was Place Marrakech which enters their section.

Speed checks were necessary along the Medina road and Mazagan Road to determine the cause of the excess number of accidents. We found many due to excessive speed since these roads are poor and run through an open area containing few buildings. The natural reaction was for the drivers to speed along these stretches of the road. We found it necessary to patrol these sections to curb this practice.

RIBBON CUTTING DATES BACK CENTURIES

The question as to the origin and historical significance of the custom of cutting the ribbon stretched across a highway during the dedicatory ceremonies is one that is frequently asked.

This practice originated in England hundreds of years ago, even before the Magna Carta. English feudal lords and dukes received their lands from their sovereign and the original ownership was carried on down through the centuries. Quite frequently villagers whose homes adjoined these estates used pathways through the estates to go from one village to another or from one point to another and in time these pathways became accepted traveled routes although crossing privately-owned property.

Under the old English law, if the free use of these pathways was not protested over a period of years, the pathways became legal public thoroughfares. In order to protect their property rights, the estate owners would each year or within a safe period of years, erect barriers or even stretch ribbons across the traveled pathways to indicate that they were not public lanes of travel. The villagers then would remove the barriers or cut the ribbon with the consent of the landowners and continue to use the pathways. On several of the larger estates for many years this practice of cutting the ribbon or removing the barrier became a ceremony participated in by the landowners and the villagers and in many cases developed into annual festivals.

Excerpt from California Highways and Public Works—July, August, 1944.

Freeways Relieve Traffic Congestion And Conserve Property Values

THE State Planning Survey which the Division of Highways is carrying on in cooperation with the Public Roads Administration, has revealed many interesting facts concerning the highway transportation system in California.

We learn that there are numerous deficiencies in our highway transportation system. By diligent study, we have detailed these deficiencies, particularly on the State Highway System, so that we have a sound basis for the preparation of improvement programs.

Deficiencies on the State Highway System are not being corrected at the rate at which they are developing. This is not a new situation brought on by the war. It was in effect before the war started and has been seriously aggravated by the war conditions.

Deficiencies, however, do not consist only of deteriorated surface or posted bridges, but also of increasingly deficient capacity with the resulting congestion.

Inadequate capacity results not only from insufficient width of pavement, but is caused also by the character of and the manner in which traffic moves or operates on the road. This movement can become quite confusing and conflicting and thus cause congestion.

When a highway is required to carry a fairly large volume of through traffic and also to serve, at the same time, a fairly large volume of local traffic—the kind that moves into and out of the business developments adjacent to the highway — congestion and conflict results. In other words, then, we have congestion resulting from a cause other than merely insufficient width of pavement.

The deficiency brought about by the development of abutting property; by inducing the character of use that produced frequent movement off and onto the highways, is probably one of the most serious and most difficult to correct.

We have several names for this situation. Some are hard names, but probably the one which describes it most effectively and recognizably is "ribbon development."

It does not seem reasonable or equitable, if the highway user pays for the cost of our main thoroughfares and probably many others besides, that owners of the abutting property should be able to profit thereby, at no expense to themselves, while, at the same time, they destroy the efficiency and integrity of the traveling facility the user is paying for. The net result is that the motor vehicle owner, bus rider and trucker pay for limited access roads, whether they get them or not.

Pondering on the best methods of correcting the situation, one of the first reactions would be that it is unwise and futile to keep on expending material sums of money derived from motor vehicle taxes for highway improvement, without protecting such investment against the character of development which destroys its usefulness and makes its function obsolete. Carrying such thinking to a logical conclusion leads to a scheme whereby the abutting property is de-

"California Highways and Public Works"—May-June, 1944—Fred Grumm, Assistant State Highway Engineer.

A modern type highway. Note decelerating and accelerating lanes and pedestrian sidewalks. This is Northern State Parkway, N. Y.

nied the right of unrestricted ingress and egress to the highway. That is the conception of the Freeway.

How does the freeway correct this situation? How does it function?

Someone recently said "Our cities are worth preserving." This implies that evidently failure and deterioration of the cities is imminent. It is true that cities have had troubles, and this situation extends back to some years before the war. The tabulation of these troubles makes rather an imposing list.

In this list, we find: (a) traffic congestion, (b) inadequate public transportation facilities, (c) decadence of property values, (d) high assessment, (e) high tax rate with consequent tax delinquency, (f) blight, (g) growing deficits.

In some of our larger municipalities, these troubles have progressed sufficiently far so that the total of savings and trust funds invested in city property mortgages could not be liquidated from the sale of the property. In fact the plight of some of the cities has become nearly desperate. Anything that will help to cure some of these ills is, therefore, decidedly welcome.

Many of these city ills are closely allied to or are the result of some other deficiency or trouble. Traffic congestion results from inadequate local transportation facilities and, in some way, has an influence on decentralization. This latter in turn produces reduction of property values, and so the vicious circle continues.

The expansion of cities followed later by decentralization is rather of a uniform pattern throughout the country. Where growth and expansion have been more or less uncontrolled, or left to the tender mercies of the real estate subdivider, we find that it has taken place as ribbon development along the transportation arteries lead-

ing into or out of the nucleus or heart of the city.

An unfortunate condition accompanying this type of expansion is the leaving of undeveloped areas between the several ribbon developments along the highways.

This method of expansion of a city by development along the busy thoroughfares leading into and out of the heart of the original town, has brought about, in many instances, a development of business frontage far in excess of that required by the population. Excessive business frontage has also created another evil—traffic congestion.

Because it becomes a tedious and uncomfortable undertaking for the resident of one of the outlying districts to go to the central part of town for his needs, little community centers have sprung up and the development of commercial establishments supplying the immediate needs of the residents have developed at the several intersections. Gradually, in this manner, decentralization has progressed; and following it, there is often a deterioration in value of properties within the central portion of the city.

Perhaps, then, if we can alleviate traffic congestion; if we can correct the inadequate transportation system; if we can supply the need of adequate facilities for uninterrupted travel in these areas of high traffic density, we may be able to remedy, or possibly to halt, the decentralization and deterioration of property values, as well as provide safer and more comfortable means of transportation.

Freeways loom as a very appropriate, applicable solution of some of the transportation deficiencies in urban areas. Freeways can be designed expressly for urban use. They can extend to the various neighborhoods. A system of freeways can be coordinated with other travel arteries in such a manner as to correct the glaring transportation deficiencies and permit, at the same time, a remodeling of the city.

Freeways or expressways located to cooperate and satisfy the needs of a city have a force that is more effective than some of the other planning methods, such as zoning. The developments of a system of freeways can secure more desirable conditions and make for more comfortable living.

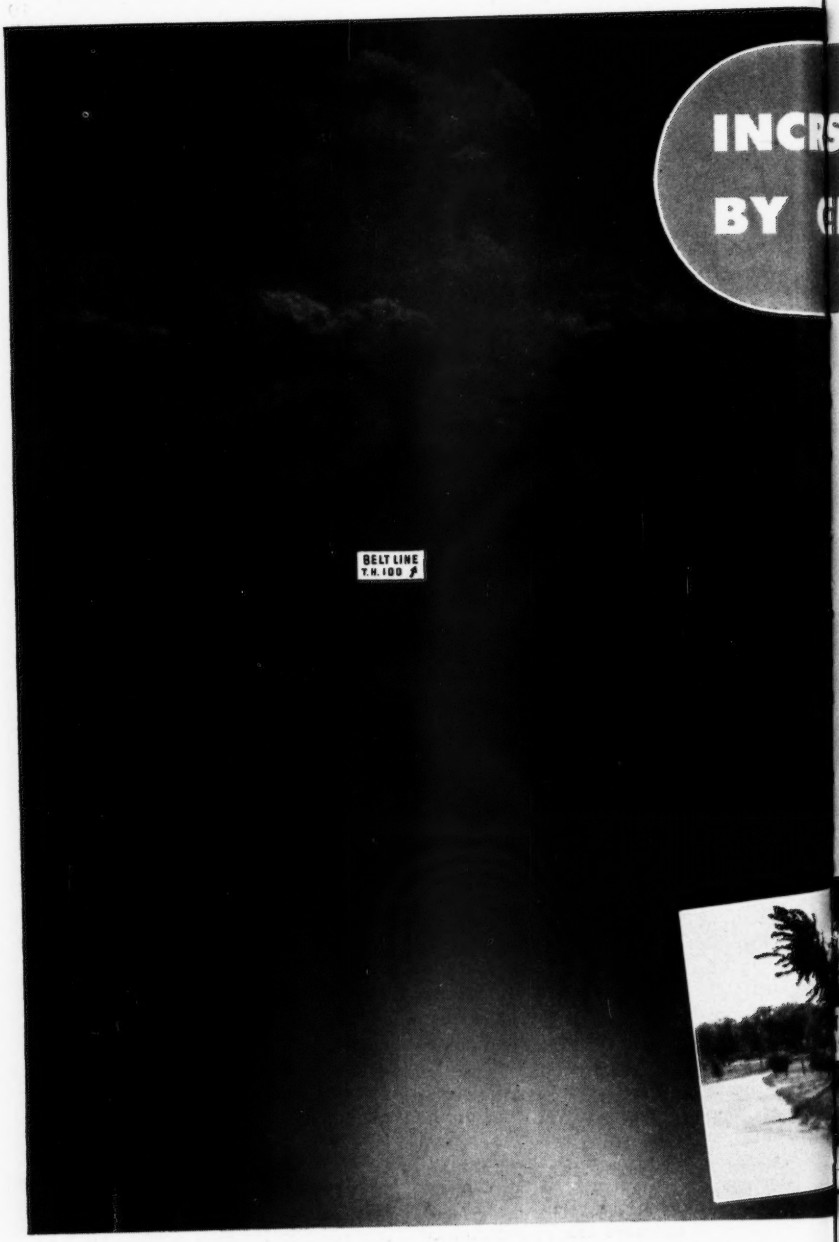
Such a system of freeways must be selected and designed as the result of a functional study of the city. The problem in each city becomes individual, even though some general principles apply universally.

What are some of the advantages or benefits offered by freeways? We may enumerate some of these advantages:

(a) The freeway method preserves the efficiency of the road, the investment made by the user. Controlling the access to the highway prevents economic waste, particularly in urban areas where high values exist. Too frequently we have experienced the necessity of expanding the capacity of our major highways, only to find that, by reason of the previous improvement, property values have increased tremendously, and we are now confronted with paying much larger sums for the additional right of way required.

(b) The freeway is the economic method of achieving optimum transportation service. The facilities which are a part of the modern freeway make it possible for traffic to operate without interruption with greater comfort and safety, which means that the capacity of the roadway is greater and this capacity remains unimpaired.

(c) The high standard of development, separating cross traffic, preventing conflict between vehicles and be-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How G-E engineers produced a safer optical system for traffic signals

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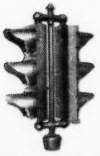

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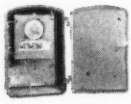

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tween vehicles and pedestrians, makes for increased safety and accident reduction. Lives are saved, property protected and time is conserved.

(d) The freeway presents a means of providing for the proper functioning of the city in helping toward the determination of a better land use pattern. This would apply particularly to the outlying urban areas where they border on the outlying rural lands.

(e) The freeway principle takes the highway from under the influence of the adjacent land. Likewise the land is freed of the deleterious effects which traffic on a major road can produce. Transportation, therefore, can remain at an optimum, and abutting lands can be kept more comfortable, safer and cleaner. The value of the property is increased because it does not depreciate by reason of congestion, traffic noise, fumes, etc., but actually enjoys the benefit of being brought closer in time to the central business district while still remaining distantly separated.

These advantages apply particularly and more emphatically to freeways in urban areas. These advantages are not always reduced in effect or magnitude as the freeway extends from urban to rural area. It is at this fringe of the urban area, where it turns into rural land, that the first major benefits are realized—where the limitation of access can prevent the further extension of the ribbon development.

The invasion of the country by the city—setting up commercial establishments along the highway in strictly rural areas—is neither economical or necessary.

The freeway will help keep the city in the city and preserve the scenic values and the freedom of the countryside.

So, here too, in the country the freeway can advantageously fulfill its function; to render safe, comfortable, effective, unimpaired traffic service with economy.

It seems that we have really evolved a solution of our heavy-duty highway problem—a means of escaping from the hopeless, uneconomical dilemma into which we had fallen.

It is quite obvious that the most fertile field to produce benefits through the application of the freeway principle is in the city—in the high traffic density area. Even at the high cost we may encounter in establishing a freeway through a highly developed urban area, we are justified by the large benefits that soon become apparent.

Directly: Congestion is relieved; efficient, adequate traffic service is provided; hazard is reduced and safety increased; relief from driving strain and added comfort is found; time is saved and economy achieved.

Indirectly: Better living conditions are promoted; residential property values are increased; decentralization is halted; decadence of business property is checked; equitable property values and taxes reestablished and stability achieved.

Perambulator Problem—A war on baby carriage traffic in Queens, L. I., has just been brought to an end in a rather unique way. It all began when engineers built concrete protective barriers on the sidewalks of the Long Island Railroad Viaduct leaving only enough sidewalk room for the passage of one perambulator. In other words, when two met in mid-viaduct, it became necessary for one to back up. Some mothers complained. Others became really nasty. The solution: Two signs, one reading, "This walk for Eastbound baby carriage traffic only," and the other, "This walk for Westbound baby carriage traffic only."—*Passenger Transport.*

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SAFETY DEVICES FOR TRAFFIC

Let's Face the Facts

by NORMAN DAMON

ACCIDENT prevention, whether a part of military training or in war production, has never before been more important to the Nation.

Accidents are sapping our strength at a time when we need every ounce of energy — every man hour — every worker—and every resource to support the military front in achieving quick and total victory.

Fatal accidents of all types in America rose from 82,500 in 1913 to a peak of 102,500 in 1941. During the present war they have dropped off somewhat, largely because of restrictions on travel.

Even so, 1943—our second year of war—carried with it an accident casualty list of 97,500 dead, nearly 10 million injured, and an economic loss of $5 billion.

And in traffic, despite 6 million fewer cars in use, with 5,000 or more permanently leaving the road daily, and with mileage down to 60 per cent of pre-war levels, deaths for the past ten months have increased continuously above the same months of the year before.

Since Pearl Harbor, 62,000 persons, half of them war workers, have been killed on our streets and highways, and more than 2¼ million persons have been injured.

Manpower Lost

Each accident—on the highway, at home, or in the factory—deals a severe critical blow to national security. It means, at best, a temporary loss of manpower and in many cases the manpower loss is permanent.

It means an extra load on overburdened doctors, nurses and hospitals. It many communities war needs for doctors have lowered available staff to one doctor for approximately 2500 persons, compared with a national prewar average of one per 750 persons.

Motor Vehicles Destroyed

Accidents are helping to dissolve the nation's passenger car fleet which is now below 24 million vehicles; 20,000,000 still is estimated as the minimum essential to sustain the war economy.

Without our millions of motor trucks we would have faced the probability of a breakdown in transportation of war goods. And without the 29,000,000 passenger cars with which we started the war we would not have had the flexibility of worker transportation which has enabled us to reach and maintain unprecedented peaks of war production.

Yet, tens of thousands of total wrecks are sacrificed to carelessness each year.

In addition, the repair of damaged vehicles is a heavy drain on available manhours of skilled mechanics, already at a dangerously low level. As much as one-sixth of the nation's total available manhours of automotive mechanics is being diverted to the repair of accident damaged vehicles.

These shocking accident statistics are symptoms of inadequate procedures. They show that the traffic control program is breaking down all along the line. They show our unwillingness to face facts and do what we know must ultimately be done.

A condensed version of a talk presented by Norman Damon (Affil.) before the Virginia State-Wide Safety Conference at Roanoke, Va.

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Driver Training Needed

For example, we are not yet willing to insist that drivers of automobiles and trucks be adequately qualified to drive safely before being given the privilege of using our streets and highways. The fact that 7,000,000 persons pass through our courts annually for traffic law violations is symptomatic of the inadequacy of our driver training and driver licensing programs.

However, some bright spots of achievement in accident prevention appear in this dismal picture. We have the record of the railroads in bringing down the 12 million annual deaths of 30 years ago to but a fraction of the 1913 total, while doubling, trebling and quadrupling the volume of travel.

In factories, machines designed for safe operation, safe working conditions, and then safety through supervision have brought about the somewhat anomalous situation whereby, generally speaking, a man is safer today in the factory than he is at home.

Present Trends Heartening

We have seen in this century the rise of such agencies as the National Board of Fire Underwriters and the National Safety Council, the latter an organization dedicated wholly to the job of preventing accidents—in industry, in the home, on the highway and in other public places. Today the Council is spearheading the drive for conservation of manpower for war-power. Scores of other organizations, each representing a segment of the public opinion that must ultimately include all business, civic, fraternal, labor, farm and other groups, have joined with one strong common voice,

in the demand for effective continuing accident prevention.

In recent years, too, we have seen a progressive recognition by each level of government — federal, state and local—of a definite and positive responsibility for the health and safety of the public, varying according to its legal authority and jurisdiction. It is a trend that will continue.

There are those who talk of the federal government invading "states' rights" but states that fail to do the job the public demands will find increased federal "invasion".

Our state traffic laws are a case in point. Non-uniformity in rules of the road, in effective and uniform driver licensing, accident reporting, signs, signals and markers in traffic control administration — all these things in varying degree are an invitation to centralized authority.

The public wants results, and will in the end support whatever government agency or procedure is necessary to get the job done. The American people have little patience with principles or theories that block results.

In traffic safety, we gradually are getting better standards on driver licensing and vehicle inspection, police enforcement methods, speed zoning on dangerous sections of road, in driver training programs—and we are seeing tremendous progress in designing roads that make physically impossible many of the major causes of accidents.

Yet on neither a state nor a national scale have we even begun to approach the point of diminishing returns from our traffic safety efforts. Nor as a nation can we point with much pride to our record so long as the accident rate in the worst state is more than four times than in the best state.

Postwar Highways

There is now before the Congress of the United States a proposal for a major post-war highway development program. It provides among other things for the development of a new key highway system comprising one per cent of the road mileage of the nation which when improved to new high standards, will carry 20 per cent of all traffic.

Incorporated in the report to Congress on that system by the Commissioner of Public Roads are proposed road design standards that, in the language of Sidney J. Williams, general manager of the National Safety Council, "would constitute the greatest single contribution ever made to highway safety".

Already we know from such roads as the Merritt Parkway in Connecticut that these standards are practical. Through improved design, plus enforcement, plus other corollary and essential efforts, the accident rate on that road is about one-tenth the national average.

The improvement to safe standards of high volume arteries such as that one offers an enormous opportunity for contributing to safer living in America.

Many other worthwhile safety activities are in progress. Certainly the recent action by the National Education Association in creating a National Commission on Safety Education is a measure holding great significance for the future. Full integration into the school curriculum of every phase of safety as a basic factor in modern living, will eventually make a contribution to accident prevention of undreamed-of proportions.

Another illustration of encouraging work is the study being conducted by the International Association of Chiefs of Police with Northwestern University, on police problems and techniques, which is expected to result in a companion volume to the Warren report on which the traffic court improvement program was founded.

These projects and others like them are gradually putting the safety job into the hands of trained, competent specialists. They are developing a sound body of knowledge based on facts.

Safety is a complex and specialized business, requiring trained engineers, administrators and technicians. It is no job for amateurs. None of us would think of trusting our health, or even our legal affairs, to untrained personnel. Public safety is no less vital than these.

Plan Post-War Safety Now

Today the conservation of manpower and materials has top priority. But, every city and state traffic agency should be ready with definite plans for getting back to its highest pre-war efficiency within 60 days after peace arrives. Because in these 60 days, some of the wartime travel restrictions will be lifted, and only prompt and vigorous control will keep the accident toll from soaring. The first year after the war may well be the most critical year in the history of highway safety.

By getting the facts on hand before the war, those available now, and what will be needed when victory comes, each agency will be laying in a solid foundation for the kind of safety action that is effective.

The time is short. The need is great. But those meeting the challenge will find, as never before, the deep satisfaction which comes from contributing to the prevention of needless suffering and the safeguarding of human life.

How Traffic Engineering Handled One-third Million Spectators

by OTTO K. JELINEK

TAKE a third of a million people, mix thoroughly with 26,000 automobiles, add generously of motor coaches, taxis, and trolley cars, and spread thickly over 19.4 acres of exhibit space for two weeks; and you have the ingredients of the traffic problem confronting the Chicago Park District traffic engineers at the recent "Weapons of War" show in Soldier Field.

The traffic engineers had a head start on the problem, however. When the Treasury Department applied for a permit to hold the spectacle to promote the 5th War Loan Bond Drive, Park District Engineers helped select this particular site for the event, as the most suitable from the traffic control standpoint as well as other considerations. Soldier Field is centrally located in the City of Chicago, and provided in addition to the area for exhibit space, 24 acres for bivouacing of troops.

In rapid order, following selection of the site, attention was given to such details as the unloading of equipment and exhibits, and the routing of all transport to the site of the event. Further, temporary tracks had to be laid in order to position a troop train, hospital car and dining car; and in moving some of the very heavy equipment, temporary planking was laid to protect underground utilities in the parking area as well as to distribute loadings over the pavement.

Architectural plans showing the proposed layout of exhibits were reviewed to determine the desirable location of entrees to the exhibits, to-

The author, a member of the Institute of Traffic Engineers, is Planning Engineer for the Chicago Park District.

gether with terminal problems of buses, taxicabs and the parking of private vehicles and the routing of pedestrians from surface line mass transportation and walkers from the central business district area.

Pedestrian Protection

As the main exhibit area was situated between two high speed drives (Outer Drive), attention had to be given to the construction of a pedestrian passerelle over Lief Ericksen Drive to the site of a complementary exhibit consisting of a flame throwing exhibit and an Army marine exhibit that were located in the lagoon east of the drive. The flame throwing equipment was located in such a way that people witnessing a demonstration were protected from the effects of the flame throwing and the spectacle was far enough away and of such short duration so as not to affect vehicular traffic movement. Temporary traffic signals were erected at Leif Eriksen Drive at 16th Street where "jeeps" and "ducks" crossed the high speed drive at irregular intervals. Pedestrians going to either the main or complementary exhibits were not permitted to cross any of the high speed drives except by passerelle.

To properly channelize traffic, to prevent accidents and also to expedite movement of traffic, snow fencing was used to enclose the show and channelize the movements of pedestrians to and from the flame throwing and marine exhibits.

Parking

A method of parking vehicles and routing vehicles to the east parking lot of Soldier Field was arranged in such a manner as to bring the cars in from the far side of the parking area up as close as possible to the main entrees of the show, thereby permitting uninterrupted pedestrian movements to the exhibit. This principle holds good for any large concentration and is a distinct safety measure. Arrangements had to be made with the Office of Defense Transportation for the rerouting of buses and augmenting the regular service due to this event.

Pedestrian Passerelle Over Leif Ericksen Drive.—*Photo by Chicago Park District.*

Fire Protection

Another item entering into the picture was the matter of fire protection. As canvas tents were used to house all exhibits, the Fire Department placed auxiliary pumpers at strategic locations around the exhibit in order to prevent any repetition of a disaster like the Connecticut Circus Fire. Arrangements also had to be made for the disposal of sewage as no direct connections were available. Chemical toilets were also used where regular toilets were not available. Because of the large crowds, arrangements were made to also use the Soldier Field comfort facilities. Water had to be arranged for the Army Engineers' demonstration of water supply problems, as well as for the bivouacing of the troops.

Attendance at the show averaged 24,876 people daily, with a peak hour of persons on the grounds amounting to 11,820.

Mode of Transportation

The mode of transportation used by the spectators to the event was as follows:

"WEAPONS OF WAR" EXHIBITS—ATTENDANCE FOR 14 DAYS

July 11th to 24th, 1944

Facility	*Per cent using this means*	*People*	*Daily avge.*
Chicago Motor Coach	9.8	34,148	2,439
I.C. RR	14.4	50,150	3,581
Taxi	1.0	3,482	249
Street Car & 'L'	38.3	133,388	9,528
Walkers	12.3	42,821	3,059
Private Cars	24.2	84,281	6,020
Total	100.0	348,270	24,876

26,093 cars were parked during the 14 days of the show, with a daily average of 1,864 cars, with average of 3.23 occupants per car. The show was attended by 78.4% adults and 21.6% children.

The exhibit was the largest concentration of captured enemy equipment and United States Army equipment ever shown in this country. The primary purpose of the exhibit was to permit the public to see and compare the quality of American techical skill, manufacturing ability and workmanship with that of our enemies in the production of military materiel. The high quality of much of the captured German and Japanese equipment was shown.

Traffic Training—Thirty police officers from the United States, Canada, Mexico and China on September 6 began a four-month course in traffic police administration at the Northwestern University Traffic Institute. All of the men received fellowships, scholarships or special grants through funds provided by the Automotive Safety Foundation, Washington, D. C., and the Kemper Foundation for Traffic Police Training, Chicago.

Mexico and China are represented in a Traffic Institute class for the first time. One member of the class is Kwang-Shee Chu, of the Chinese embassy in Washington, D. C., formerly a Chinese provincial police officer. From Mexico comes Second Class Agent Oscar Danel Endewis, of the Corps of Federal Highway Police, Mexico City. A Canadian city is represented for the second time by Inspector Gaudiose Buteau, another member of the class, from the Quebec city police department.

POST-WAR PLANNING COMMITTEE PROGRESS REPORT

During the past year, four meetings of the Post-War Planning Committee have been held. One each in Chicago, New York, Washington and New Haven—thus providing an opportunity for nearly all members of the Committee to attend at least one of the meetings.

Early in the year, the Committee upon careful consideration, decided that its work should be divided into three major sections for the purpose of preparing a technical document describing in some detail the immediate post-war problems in connection with modern urban highway improvement. The report is to contain an appraisal of engineering techniques that have been applied for the purpose of obtaining greater safety and efficiency from the present street system; a discussion of traffic operations requirements in the design of Expressways; and a description of state, county and city Engineering Departments.

Sub-Committees

In the preparation of material for each section of the report, the work of the committee was divided into sub-committees. They are: Sub-Committee on Traffic Planning and Design Principles for Modern Urban Traffic Facilities, E. H. Holmes of the Public Roads Administration, Chairman; Sub-Committee on Traffic Control Improvements, T. M. Matson, Director of Yale Bureau for Traffic Research, Chairman; and Sub-Committee on Organization and Administration of Traffic Engineering Departments, Harry E. Neal, Traffic Engineer of the Ohio State Highway Department, and Lloyd M. Braff, Assistant Traffic Engineer, City of Detroit, Co-Chairmen. In addition, a questionnaire on post-war traffic planning has been sent to all cities over 50,000 population and to date approximately 100 replies have been received. These replies, signed either by the Mayor, City Manager or City Engineer, indicate a spreading interest and desire to make traffic improvements in the post-war years.

The Final Report

At the last meeting of the Committee, held on August 30 at New Haven, the following were agreed upon as a tentative basis for the preparation of the final report.

To Whom Directed

Mayors, city managers, state officials, support groups.

Purposes

1. To state problems of highway transportation and best utilization of highway facilities.
2. To indicate the values which can accrue from applying engineering to Traffic problems.
3. To indicate how states, counties, and cities desiring to do so, can effectively introduce and utilize such engineering approaches and procedures.

Methods

1. By description of needed functions and procedures.
2. By evidence (pictures, before and after data, diagrams, etc.) of VALUES of this approach and these procedures.

Examples Wanted

It is the intention of the Committee to use examples and illustrations profusely throughout the report and therefore the Committee makes a general appeal for descriptive material, sketches and photographs of engineering improvements or control measures that have been used in communities effectively. They should indicate benefits derived through application of the scientific approach. Examples and illustrations should be transmitted to Grant Mickle, Traffic Engineer, Automotive Safety Foundation, Washington, D. C.

I T E NEWS AND PERSONALS

HIGHLIGHTS OF I. T. E. FIFTEENTH ANNUAL MEETING

The fifteenth annual meeting of the Institute of Traffic Engineers, October 1, 2, 3, and 4th at Chicago's Hotel Sherman was a grand success, with over 100 persons registering.

October 1, Sunday, was devoted to committee meetings and the general business session for members only. Traffic Engineering sessions were held on Monday and Tuesday, with Wednesday's morning session held jointly with the American Society of Safety Engineers and the afternoon session with the American Association of State Highway Officials, American Association of Motor Vehicle Administrators, International Association of Chiefs of Police, and the National Safety Council.

Technical papers and round-table discussions will be reproduced in the 1944 I.T.E. PROCEEDINGS, available around Christmas.

BUSINESS MEETING

The business session, Sunday afternoon at the Hotel Sherman, opened with reports by President Hammond and Secretary-Treasurer Smith. It was brought out that 173 Institute members have served on the 15 Committees during the past year, undertaking projects that, en toto, constitute the focal point of Institute progress. Highlights of Smith's report follow:

Secretary-Treasurer Report

I.T.E. Standard No. 2 on pre-timed, fixed cycle, traffic signal controllers was approved on October 14, 1943 by the American Standards Association, who purchased a considerable number of copies.

Distribution of *War Worker Transportation* has continued so that now there are available only several hundred copies.

TRAFFIC ENGINEERING has been steadily improved during the year. The past 12 issues have averaged 30 pages each, exceeding all previous years in size. This was possible because of increase in circulation, better advertising contracts, and concerted effort on the part of the editorial staff.

There are about 500 copies of the *1943 Proceedings* available for distribution.

The Institute was one of the sponsors of *A Program for Post-War Traffic Safety* published by the National Safety Council.

The Institute participated in the *Greater New York Safety Council Annual Safety Conference* as Co-sponsor of a panel on current and Post-War Speeds, March 28, 29, 30.

The Institute sponsored the traffic engineering sessions at the *Central States Safety Congress* in Kansas City, June 6, 7, 8.

The Institute has joined with the International Association of Chiefs of Police to develop *Warrants for Traffic Officer Control at Intersections.*

The Institute has joined with the National Safety Council and American Association of State Highway Officials, to study *Post-War Speed Control.*

Changes in the Constitution and By-Laws which were approved at the Annual Meeting a year ago on October 3, 1943, were submitted to the Membership in October and were officially recorded as adopted after a majority favorable vote was received in November, 1943. These amendments provided for: (a) a new definition of traffic engineering; (b) a change in Affiliate membership requirements; (c) the maintenance of headquarters offices at such places that the Board of Direction may designate.

At the August 27-29, 1944 meeting of the Board, resolutions were adopted providing for amendments to the Constitution which will sanction creation of Institute sections, to be brought up at this business meeting.

Other Reports and Business

At the request of the Officers and Board of Direction, Mr. William B. Powell (Mem.) is undertaking to write the history of traffic engineering. The assistance and cooperation of every member is earnestly requested in this important project. Committee reports were presented by committee chairmen. Space does not permit including these here.

ELECTION OF NEW OFFICERS

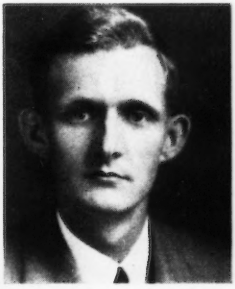
The 1944-45 terms of office for the newly elected Institute officers were inaugurated at the Sunday business meeting. Harold F. Hammond was re-elected President, T. J. Seburn re-elected Vice-President, and Wilbur Smith was re-elected Secretary-Treasurer.

On the Board of Direction, Harry Neal, Ohio State Traffic Engineer, and J. W. A. Bollong, Seattle, Washington, City Traffic Engineer, were elected as new Board members, replacing Graham Cole, Ass't Secretary, Metropolitan Life Insurance Company and William R. McConochie.

OFFICERS FOR 1944 - 45

Vice-President
THOMAS J. SEBURN

President
HAROLD F. HAMMOND



Secretary-Treasurer
WILBUR S. SMITH

BISCUIT BANTER BREAKFAST

The Biscuit Banter Breakfast on Tuesday morning, October 3rd, was well attended and featured, in addition to the excellent food served by the Triangle Restaurant, plenty of "shenanigans", including an overly-ambitious employee with a vacuum cleaner, and a waitress who couldn't help dropping trays of dishes now and then. President Hammond, coming in late, was forced to shave at his table before being allowed to eat. General master of ceremonies was Bill McConocie, who introduced a one-act playlet "So You Want to Plan a City" featuring Leslie Williams (sans trousers), J. W. A. Bollong, and T. J. Seburn, which climaxed with the three actors in a confused though heated argument as they walked up and down a 20-foot long map (laid on the floor).

Lloyd Braff, chairman of the Resolutions Committee, was largely responsible for planning the breakfast, assisted by John Dobelek and Holden LeRoy.

ANNUAL DINNER

The annual dinner, at the LaSalle Hotel on Tuesday evening was a distinct success. Harold Hammond, Institute President, presided over the program, and introduced the new officers of the I.T.E. as well as other notables present.

T. M. Matson, Director of the Yale Bureau for Street Traffic Research, presented a brief but inspiring talk on the history of the Institute of Traffic Engineers, tracing back to its origin fifteen years ago.

Past-Presidents Honored

As a fitting tribute to the work carried on by the Past-Presidents of the Institute, and acting upon recommendation of the Board of Direction, Hammond presented beautifully inscribed certificates to Burton Marsh (President, 1932-1934), Roger L. Morrison (President, 1936-1937), and Grant Mickle (President, 1941-1943). Other Past-Presidents receiving certificates, but not present at the dinner are: Ernest P. Goodrich (President, 1930-1932), Lewis McIntyre (President, 1934-1936), Leslie Sorenson (President, 1937-1939) and Hawley Simpson (President, 1939-1941).

Norman Damon, Vice-President, Automotive Safety Foundation, served as toastmaster for the remainder of the evening's program, and introduced William S. James, President, Society of Automotive Engineers, and Chief Engineer, Studebaker Corporation, who gave an address on "Post-War Highway Traffic".

James brought out that attention to and priority of construction of post-war highway traffic facilities must necessarily center in urban areas, as brought out in the Report on Interregional Highways. He pointed out that immediate post-war automobiles will not be very different from pre-war models; the automobile industry will not experiment on the public, and must prove any innovations before releasing them. The post-war plans for automobile design and for traffic control must be based on facts, not opinion.

1944 PROCEEDINGS
Institute of Traffic Engineers
FIFTEENTH ANNUAL MEETING

WILL BE AVAILABLE ABOUT CHRISTMAS

PLAN TODAY

To Use GROTELITE

PLASTIC REFLECTORS ON TOMORROW'S HIGHWAYS

These sturdy roadside delineators are equipped with the new Grotelite plastic reflector.

They are prismatic type; front face is smooth.

High intensity reflection at long range. Extreme angularity without loss of reflecting power. They remain visible almost up to the point of passing by the vehicle. Housings are of rugged construction, durably finished.

BE SURE TO SPECIFY GROTELITE PLASTIC REFLECTORS FOR ECONOMY

The Grotelite Co., Inc.

Bellevue, Kentucky

PERSONALS

Peter J. Stupka (Mem.), formerly Senior Civilian Protection Officer, OCD, Washington, D. C., is now Associate Editor, Sarra, Inc., Photosound Division, 16 East Ontario Street, Chicago, Illinois.

A. N. McCandliss (Jun.), formerly with the Pennsylvania Department of Highways, is now traffic engineer with the Michael Baker, Jr., Consulting Engineers, Planners and Surveyors, of Rochester, Pennsylvania. This organization has opened offices in the Park Building in Pittsburgh, and has been employed to design and prepare construction plans for the proposed Penn - Lincoln Parkway, the number one post-war highway project for Western Pennsylvania.

Mr. McCandless is now with the organization's San Antonio office, preparing the traffic portion of a report for that city for post-war highway construction.

K. M. Hoover (Assoc.), was recently appointed Assistant President of the Philadelphia Transportation Company. Hoover was formerly Assistant to the Vice-President, Operations.

Franklin M. Kreml (Affil.), Director of the Northwestern University Traffic Institute was promoted on July 11th to the rank of Lieutenant Colonel, according to news received by Mrs. Kreml. Colonel Kreml entered military service as a Captain in July, 1942. He is Chief of Transportation for the 5th Army in Italy.

Major Robert Holmes (Jun.) and **Capt. J. Feuchter** (Mem.) report that they are quite busy at present with the new three weeks Military Traffic Control courses now being conducted at the Provost Marshal General's School, Fort Custer, Michigan. The School has been busily engaged in conducting maneuvers for various Military Police battalions immediately prior to their shipment overseas. These battalions are going overseas primarily to handle traffic control.

Bruce Greenshields (Mem.), on leave of absence from Brooklyn Polytechnic Institute, is now with the Yale Bureau for Street Traffic Research making a study of traffic movement characteristics at intersections, utilizing the photographic technique.

John L. Towers

Funeral services were held on September 19 following death of John Towers, Associate Member of the Institute of Traffic Engineers. He was Assistant Highway Engineer with the Illinois Division of Highways.

New Editors Announced

Announcement is made of the appointment of Henry K. Evans, Traffic Engineer, National Conservation Bureau, as Editor of TRAFFIC ENGINEERING MAGAZINE.

Leslie Williams, City Planner for the American Transit Association, who has served as Editor for the past three years, presented his resignation at the annual business meeting in Chicago on October 1st, and it was agreed at that time that he should be commended highly for the splendid work he has carried on, in maintaining the high quality in selection and presentation of contents.

In turning over the job to Evans, who has served as Co-Editor for the past year, Williams said, *"I want to thank those who have cooperated in helping to prepare the magazine — specifically Co-Editor, Henry Evans, Technical Editor, Charles Prisk, Raymond F. Riegelmeier, Advertising Manager, George Fisher, Circulation Manager, and Associate Editors, Elroy Ericksen, Stuart Hawley, T. M. Matson, Welton Harris, Glen Smoot, William McConochie, Virden Rittgers*